

Title (en)
Process for the production of oxygen from air, in particular by means of an electrochemical cell with a ceramic membrane and with controlling means allowing a continuous oxygen production

Title (de)
Verfahren zur Herstellung von Sauerstoff aus Luft, insbesondere mittels einer elektrochemischen Zelle mit keramischer Membrane und mit einer Steuereinrichtung zur kontinuierlichen Herstellung von Sauerstoff

Title (fr)
Procédé de production d'oxygène, à partir d'air, en particulier au moyen d'une cellule électrochimique avec membrane céramique, avec des moyens de contrôle permettant une production continue

Publication
EP 1801070 A1 20070627 (FR)

Application
EP 05300962 A 20051124

Priority
EP 05300962 A 20051124

Abstract (en)
An oxygen or oxygen-enriched gas, pressurized, from air (2) or from an oxygen-lean gas involves is produced by using a generator (3) that generates oxygen at its outlet (4), from air introduced at its inlet (5). The generator is made of buffer tanks (6) for storing oxygen generated by generator, which are placed communicating at their inlet with generator outlet, and at their outlet with an application consuming the oxygen produced or a control system for adjusting the flow rate and/or the pressure of the oxygen produced to the demand in flow rate and/or pressure of the application. Oxygen or oxygen-enriched gas production, pressurized, from air or from an oxygen-lean gas involves using a generator that generates oxygen at its outlet, from air introduced at its inlet. The generator is made of buffer tanks for storing oxygen generated by the generator, which are placed in parallel, communicating at their inlet with the generator outlet, and at their outlet with an application consuming the oxygen produced or a control system for adjusting the flow rate and/or the pressure of the oxygen produced to the demand in flow rate and/or pressure of the application. The control system comprises a module for controlling the two buffer tanks, performing the functions: the storage in one of the buffer tanks called nominal tank, of a nominal oxygen reserve for maintaining, an oxygen outlet pressure, called nominal measure, and/or an outlet flow rate, called nominal flow rate, the storage in the other buffer tank is called other peak tank, of an oxygen peak reserve, an oxygen pressure called peak measure, which is higher than or equal to the pressure called nominal pressure, and/or an outlet flow rate, called peak flow rate, according to the oxygen pressure, demanded, which is higher than or equal to the nominal pressure, and lower than or equal to the peak pressure, and/or according to the oxygen flow rate demanded, which is higher than or equal to the nominal flow rate, and lower than or equal to the peak flow rate, an off take at the outlet of the nominal tank and/or of the peak tank, and/or the control of the generator for generating and resupplying oxygen to the nominal tank and/or the peak tank.

IPC 8 full level
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B01D 53/326 (2013.01 - EP US); **C01B 13/0251** (2013.01 - EP US); **B01D 2257/102** (2013.01 - EP US); **C01B 2210/0046** (2013.01 - EP US)

Citation (search report)
• [A] US 2004042944 A1 20040304 - SEHLIN SCOTT R [US], et al
• [DA] US 5855762 A 19990105 - PHILLIPS ROBERT JOHN [GB], et al
• [DA] US 6368491 B1 20020409 - CAO TUAN Q [US], et al
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• [A] US 2005016865 A1 20050127 - TSAI TSEPIN [US], et al
• [A] US 4519813 A 19850528 - HAGIWARA ZENZI [JP], et al
• [A] EP 0948989 A1 19991013 - AIR LIQUIDE [FR]

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Designated extension state (EPC)
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